

MUSC Department of Medicine

Faculty Mentoring and Professional Development
Policy

December, 2011

Mentoring Outline

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1) Policy Statement

The goal is for each faculty member to achieve their individual full potential as a member of the Department of Medicine, at the Medical University of South Carolina and to be rewarded for that achievement. Since the University is a place where everyone is learning, it is vital that each member of the faculty see tangible evidence of that professional growth, whether it be in the easily measured domains of writing papers for publication, writing and receiving grants, or preparing and presenting lectures for students and trainees of our colleges, or in the less easily measured aspects of teaching students, residents and fellows, mentoring young investigators and junior faculty, or developing clinical expertise by specializing in some area of clinical medicine. It is incumbent on faculty members, their mentors, Department Chairs, and the university leadership to see that tangible progress is being made and documented.

2) Description of Promotion and Tenure Process within the Department of Medicine

The DOM has clearly stated career goals and guidelines, and expected accomplishments from the initial appointment as an Assistant Professor up to the Professor level. The following tables are on the DOM website in a Career\Mentoring folder within the faculty toolkit and will be used by mentors and Division Directors at the time of annual contract to gauge the progress of the faculty member towards achieving the next faculty rank.

DEPARTMENT OF MEDICINE PROMOTION GUIDELINES

Assistant Professor (from Fellow or Instructor)	Academic Investigator	Academic Clinician (Collaborator)	Clinician Educator
Demonstrates commitment to career in academic medicine	●	●	●
Is developing excellence as educator (awards, evaluations)	●	●	●
Is developing reputation as excellent clinician/collaborator		●	●
Carries a clinical/collaborative load		⊖	▽
Is performing high quality research in mentored setting	●	●	⊖
Has joined appropriate scientific/professional organizations	●	●	●
Is developing skills, support systems to submit grant proposals	●	●	
Has 3-year plan in place	●	●	●
Has published (or in press) first, second or last author peer-reviewed manuscripts	≥ 1	≥ 1	≥ 1
Associate Professor (from Assistant Professor)	Academic Investigator	Academic Clinician (Collaborator)	Clinician Educator
Has fulfilled with distinction duties of Assistant Professor	●	●	●
Has established independent laboratory, clinical or	●	●	

collaborative research effort			
Has obtained research support from extramural source	●	●	
Has presented talks/posters at local/regional/national meetings	●	●	⊖
Is involved in local and professional organizations	●	●	●
Is involved with committees at intramural level	●	●	●
Is mentoring students and trainees	●	●	●
Has contributed to course development	●	●	●
Has established research collaborations	●	●	⊖
Has attained excellence as educator (awards, evaluations)	●	●	●
Has attained reputation as excellent clinician/collaborator		●	●
Continues to carry a clinical/collaborative load		⊖	▽
Has published peer-reviewed manuscripts (first, second or last author)	≥ 10	≥ 10	≥ 3
Has published peer-reviewed manuscripts (total)	≥ 20	≥ 20	≥ 5
Professor (from Associate Professor)	Academic Investigator	Academic Clinician (Collaborator)	Clinician Educator
Has fulfilled with distinction duties of Associate Professor	●	●	●
Continues independent laboratory, clinical or collaborative research effort	●	●	
Continues research support from extramural source	●	●	
Has mentored successfully (e.g. trainees in academic medicine)	●	●	●
Has achieved national recognition in specific field	●	●	
Has served on national committees, study sections, editorial boards; reviews manuscripts	●	●	⊖
Is a leader on committees at intramural level	●	●	●
Maintains excellence as educator (awards, evaluations)	●	●	●
Maintains reputation as excellent clinician/collaborator		●	●
Continues to carry a clinical/collaborative load		⊖	▽
Has published peer-reviewed manuscripts (first, second or last author)	≥ 25	≥ 25	≥ 6
Has published peer-reviewed manuscripts (total)	≥ 50	≥ 50	≥ 15

● Required ⊖ Moderate ▽ Heavy

3) Documentation of Career Development

In order to achieve promotion and tenure, the professional growth of the faculty member must be documented. In addition to an up-to-date curriculum vitae in the format required by the College of Medicine, Department of Medicine (located in the Career Development folder in the DOM website) portfolios of research, teaching, and clinical accomplishments are important to develop

and keep updated progress through the academic ranks. To advance through the academic ranks the quality of the faculty member's individual scholarship is of critical importance, but depending on track, more emphasis will need to be placed on a specific portfolio e.g., for academic investigators, the research portfolio is most important, whereas for a faculty member in an academic educator track, the teaching portfolio is of primary importance. It is also acknowledged that there may be faculty who do not fit into one of these tracks, and their career development will be assessed on an individual bases. The overriding principal will be scholarship and evidence of growth, productivity, and service. Portfolio's should include:

Academic Researcher Portfolio

1. Completion of educational requirements necessary for career in academic research
2. First authored original publications (with impact factor information if possible)
3. Senior authored original publications (indicate whether the first author was someone you mentored)
4. Co-authored original publications
5. Other publications, e.g., review papers, book chapters, textbooks
6. Career training grant awards
7. Independent grant awards as PI
8. Grant awards as Co-investigator
9. Presentations of research at national / international meetings
10. Peer recognition for research activities including invitations to present at national / international meetings and other universities
11. National recognition as evidenced by election to specialty societies, editorial boards, service on national committees, NIH study sections, grant review panels of other funding agencies
12. Institutional or external research awards
13. Mentoring achievements: individuals mentored, achievements of mentees including grants received and important publications of mentees under your guidance, and where mentees are today
14. Membership and involvement in professional and scientific organizations
15. Contributions to research-oriented committees at department, college, university, community, state, regional, national and international levels
16. Leadership roles in research in appropriate department, college, or university

Academic Educator Portfolio

1. Completion of educational requirements necessary for career in academic teaching
2. Philosophy of teaching and learning
3. Teaching goals for student accomplishment
4. Teaching methods and evaluation strategies
5. Participation in course and/or curriculum development
6. Engagement in the scholarship of teaching and learning (SoTL)
7. Evidence of teaching accomplishments
 - a. Description of types of different teaching activities such as formal courses, small group seminars, one-on one tutorials, supervision of student research projects, chairing thesis or doctoral committees, and coaching manuscript preparation for students, residents, and fellows

- b. Course materials (syllabi, readings, handouts, assignments, examinations)
 - c. Documentation of teaching innovation (simulation, educational technology)
 - d. Manuscripts that are related to teaching and or educational activities
 - e. Student, resident and fellow evaluations of teaching
 - f. Peer evaluations of teaching
 - g. Audience evaluations of presentations at state or national meetings
 - h. Membership in departmental, college, university, society, community, state, regional, national and international committees or organizations related to teaching
 - i. First authored publications (papers, chapters, reviews, textbooks) related to teaching
 - j. Senior authored publications (papers, chapters, reviews, textbooks) related to teaching
 - k. Co- authored publications (papers, chapters, reviews, textbooks) related to teaching
 - l. Grant awards related to teaching
 - m. Presentations on teaching at national / international meetings
 - n. Leadership roles in teaching in appropriate department, college, or university
 - o. Honors and awards for teaching
8. Mentoring achievements in teaching: individuals mentored, achievements of mentees in teaching arena, and where mentees are today

Academic Clinician Portfolio

1. Completion of educational requirements necessary for career as an academic clinician, including certification by appropriate specialty board
2. Evidence of a heavy clinical load
3. Evidence of excellence in high quality patient care
4. Development of innovative clinic practices i.e., new clinical services that the faculty member established or participated in e.g., telemedicine, new surgical technique
5. Evidence of organization of clinical services to provide an optimal setting for medical education and a database for research
6. Evidence of excellence in clinical training of students, residents, and fellows
7. Documentation of teaching activities including formal lectures, grand rounds, and continuing medical education
8. Superior evaluations of teaching by students, residents, fellows, peers, course directors and department chairs
9. First authored publications (papers, chapters, reviews, textbooks)
10. Senior authored publications (papers, chapters, reviews, textbooks)
11. Co-authored publications (papers, chapters, reviews, textbooks)
12. Presentations at national or international meetings
13. Peer recognition for clinical activities including invitations to present at national / international meetings and other universities
14. Co-investigator on research grant awards
16. Mentoring achievements: clinicians trained, achievements of trainees, and where trainees are today
17. Membership and involvement in professional and scientific organizations

18. Contributions to clinically oriented committees at department, college, university, community, state, regional, national and international levels
19. Leadership roles in clinical activities in appropriate department, college, or university

4) Resources Available for Faculty Development

The DOM is well aware that resources are needed in order to provide for faculty development. One type of resource that is needed is information. We are developing a Career\Mentoring site within the DOM website that will contain or coalesce information from a variety of sources for both mentee's as well as for mentors. This information will include all forms and templates (including those at the end of this document), this mentoring document, and Appendix 1 from the "Best Practices and Recommendations for Departmental Mentoring".

The resources that are needed vary widely depending upon the faculty track, faculty rank, and Division. Many of the issues that are related to faculty development including protected time, personnel support such as administrative assistants, nurses, travel, etc, are handled at the Divisional level. Because of the importance of faculty development we propose to form a Faculty Development Committee (FDC) at the Department level which could be co-chaired by the Mentoring Facilitators (see below) that includes representatives of each Division to address the issues of faculty support and development. These representatives could be the Divisional Mentoring Champions (see below). This committee could consider a number of issues including the best way of meeting the needs of the faculty, what are the impediments to success? How can we utilize scarce resources most effectively? Is there a way for Divisions to work together, share resources, and expertise that would enhance the development of our junior faculty?

Since this committee has membership from each Division, another duty of this committee would be to track faculty recruitments. When the negotiations become serious, the Mentoring Facilitators along with the FDC and in conjunction with the Division Director would assign an interim mentor would be an advocate for the faculty recruit in areas such as:

- Deciding on the right track and rank
- % effort for clinical activities including after hours call (if not a conflict for the interim mentor)
- % effort for teaching (if not a conflict for the interim mentor)
- Adequate protected time for research and teaching effort
- Adequate support for administrative, clinical (e.g. nurse practitioner or physician assistant), and research efforts (e.g. research nurse, lab technician)
- Development of a mentoring team. The initial mentor can help the recruit develop a mentoring team. This can start during the interview process by introducing the candidate to potential members of a mentoring team and continue once the new faculty member arrives.

In addition, the FDC would be a valuable resource for determining if there are junior faculty members that have somehow fallen through the cracks and lack proper mentoring. This

committee could serve as an advocate for the junior faculty member regarding career and resource issues to the Division Director and Chair of the DOM.

The Department of Medicine continues to work towards supporting the research activities of the junior investigators in a number of diverse activities. (1) An example is the pending NIAMS MCRC application, which includes a pilot project program that consists of projects supported by the Department of Medicine in the amount of \$500,000 over five years. Junior faculty in the Department of Medicine will be encouraged to apply for these awards. In addition the Dean of the College of Medicine has agreed to support one pilot project per year in support of the MCRC through the SCTR program that is available to DOM faculty. (2) Another example of the Department's commitment to mentoring pertains to NIH sponsored K awards. The Department encourages junior faculty members to submit mentored K awards to NIH. Since mentoring is a very important part of these grants the DOM will make available travel funds for the mentor and K awardee to attend one meeting per year. This will allow the awardee to network, which is important for career development, and also to learn new findings in clinical or basic research. (3) The DOM will also work towards establishing a Faculty Development Endowment Fund to support mentoring activities and mentoring education. In this regard, there exists the Mithoefer Lectureship Fund that will be used to bring in one to two speakers per year. This visit will be comprised of a lecture and small group activities to be focused on mentoring, faculty development, or some other aspects of education. (4) There are currently three T32 training grants in the DOM. These NIH funded grants are very important in terms of training future clinical and basic scientists. However, these programs are housed in different divisions and there is at the present time little interaction between PI's, mentors, and mentees among the various T32's. We plan to support workshops for the various mentors and trainees of these T32 focused on career development and in mentoring. Although the trainee's are not faculty members, a high percentage of the trainees will go into academic medicine either at MUSC or equivalent institutions. (5) The Department also recognizes that the Masters of Science in Clinical Research (MSCR) is very important in the development of junior faculty members or trainees who are intent on an academic career. The Department will continue to explore avenues to help support this program with the goal of increasing clinical research in our department. (6) We will have three yearly awards for mentoring, one each for Basic Science, Clinical, and Education mentoring. Each awardee will receive a plaque and a check for \$1000. Selection of awardee's will be accomplished through input of the mentees, and Division Champions.

5) Mentoring Plans and Agreements

Mentoring within the DOM offers unique opportunities and challenges. The department has 11 Divisions that vary widely with regards to mission and composition of faculty. A snap shot of the present faculty lists a total of 70 Professors, 52 Associate Professors, 132 Assistant Professors, and 40 Instructors/Research Associates. Since all faculty under the rank of Professor should be mentored, this means that around 224 faculty members need to be mentored. Since some Professors may not want to or be suitable as mentors, this means that there may be faculty that bears a significant level of mentoring responsibility. In addition, the one size does not fit all concept is clearly applicable in the DOM and within Divisions.

The overall structure of the DOM mentoring plan will consist of two department-wide Mentoring Facilitators one clinical and one research oriented. The Department of Medicine Vice Chairs for Research will serve as the Mentoring Facilitators. The Director of each Division will appoint a Mentoring Champion(s) for that Division who is not the Division Director. Mentoring Champions will receive a stipend for their efforts. Mentoring Champions will receive a stipend for their efforts. The Department will provide \$50,000 to support this overall departmental endeavor, to be matched proportionately by each Division. The stipend to each champion will be a baseline amount and an incremental amount based on the number of assigned faculty per Mentoring Champion.

It will be the responsibility of the Champion to work with the faculty within the Division to make sure that each faculty below the rank of Professor has a mentor or mentors. Where possible two mentors will be paired with each faculty member one that is in the area of expertise (clinical/research) the other to advise in career counseling. However, one mentor will be designated as lead mentor. The development of a mentoring plan will be a shared effort between the faculty member, the mentors and the Mentoring Champion. The Department wide Mentoring Facilitators will then assess each mentoring plan. These plans should include but not be limited to: advice in an area of focus (e.g., research, teaching, clinical care); professional development, which should include an active role for the mentor in promoting the career of the mentee (e.g., suggesting role for mentee on a grant review panel or scientific writing committee, introducing the mentee to leading experts in the field, etc.); monitoring the progress of the mentee; helping to ensure academic promotion of the mentee at MUSC; academic career guidance; and psychosocial support. It is essential, and one of the major responsibilities of the Mentor Champion, to ensure that the mentors and faculty members are a “good fit”. The mentors and faculty should enter into a written contract or agreement (appendix) in order to ensure that duties, responsibilities and expectations are clearly stated and acknowledged. Although frequency of meetings will vary, the primary scholar mentor should meet with the faculty member 1 to 4 times per month. The career mentor should meet with the faculty member at least twice a year to review the mentee’s updated curriculum vitae and career development plan (appendix). It is acknowledged that the type and frequency of mentoring may vary depending upon the level of academic achievement as well as the success, productivity, motivation and ability to work independently.

Within a Division at least twice a year the mentors and faculty member both separately and together should meet with the Division Mentoring Champion to determine if the mentoring process is working successfully and to assess the overall progress of the faculty member. The final stage in this process is the yearly contract signing in which the Division Director can assess the progress of the faculty member and determine if the mentoring process has been effective.

The Department wide Mentoring Facilitators will meet with the Division Mentoring Champions and DOM Chair at least quarterly to assess progress of the mentoring program and to address problem areas, substandard performance of faculty members, mentoring issues, etc.

Although all Professors will be encouraged to serve as mentors, it is acknowledged that certain individuals have a passion for this endeavor. Although some individuals may be good natural mentors, all individuals who mentor can learn new techniques and knowledge on how to mentor

effectively. In this regard, the SCTR is developing an annual mentoring training program and all mentors within the Department of Medicine will be required to attend this training program. In addition, the clinical and research Mentoring Facilitators will be charged with developing a DOM mentoring educational program. This may include web based learning, webinars, and developing a seminar program with internal and external speakers. It is also acknowledged that certain individuals tend to attract faculty members who want them to serve as their mentors. This results in a considerable time investment that can detract from other duties and responsibilities. The DOM will encourage mentors who are mentoring multiple faculty members to apply for mentoring awards from NIH (K05, K07, or K24 grants) that can provide up to 50% salary support for 5 years (renewable for another 5 years in some NIH institutes). In addition the Chair of the DOM will work on supporting and rewarding successful, in-demand, faculty mentors who are typically already over-committed with their own research, clinical, educational, or administrative responsibilities. This will include:

- Providing salary support for those mentors with a particularly heavy mentoring load
- Providing a financial bonus for successful mentoring
- Providing annual awards for successful faculty mentors
- Ensuring that successful mentoring is a criterion to be used for promotion.

6) Metrics of Successful Mentoring

It is recognized that the DOM chair is ultimately responsible for the success of the mentoring program. However, given the size of the DOM with over 200 mentored faculty members, it is not possible for the Chair to meet with each faculty member individually on a yearly bases. This means that a great deal of the responsibility for assessing the success of mentoring rests within the structure of DOM mentoring plan. First is how successful has been the mentors-mentee relationship. This will be assessed yearly in written confidential evaluations by both the mentor and the mentee that will go directly to the Chair and the Mentoring Facilitators. In additional Division Champions will provide their perspectives concerning the mentoring process of each faculty member and finally will be the input of the FDC and each Division director. In addition the DOM will require that each Division have a Divisional promotion committee if they do not have so already that reviews the progress of each mentored faculty member towards their goal of being promoted. The following criteria will be used to determine effectiveness of mentoring:

Research-related metrics for determining the effectiveness of mentoring

- Number of grants submitted by mentee under the mentor's guidance
- Number of these grants funded
- Number of original publications under the mentor's guidance
- Importance of original publications under the mentor's guidance (e.g., impact factor, editorial written on paper)
- Career development progress of mentee while guided by the mentor, e.g., presentation of research at national / international meetings, invited presentations at meetings or other universities, election to study sections or specialty societies, promotion of mentee
- Research awards of mentee under the mentor's guidance

Teaching related metrics for determining the effectiveness of mentoring

- Teaching accomplishments of mentee under mentor's guidance, e.g., formal courses taught, course materials developed, innovative teaching methods developed
- Number of education publications under the mentor's guidance
- Importance of education publications under the mentor's guidance (e.g., impact factor, editorial written on paper)
- Number of education grants submitted by mentee under the mentor's guidance
- Number of these grants funded
- Career development progress of mentee while guided by the mentor, e.g., presentations at national / international meetings, invited presentations at meetings or other universities, membership in education committees in or outside of the institution, promotion of mentee
- Honors and awards for teaching to the mentee under the mentor's guidance

Clinical related metrics for determining the effectiveness of mentoring

- Number of presentations at institutional, national, or international meetings by trainees (students, residents, and fellows) or junior clinical faculty under the mentor's guidance
- Number of publications by trainees (students, residents, and fellows) or junior clinical faculty under the mentor's guidance
- Innovative clinical care developed by junior faculty under mentor's guidance
- Career development progress of trainees and junior clinical faculty while guided by the mentor, e.g., graduation from clinical training program of trainees and subsequent positions, invitations to junior clinical faculty to present at meetings or other universities, junior faculty participating as members in clinical committees in or outside of the institution, promotion of junior clinical faculty
- Honors and awards for teaching to the junior faculty member under the mentor's guidance

Metrics to determine the overall effectiveness of the departmental mentoring plan will be:

- Surveys of faculty on their satisfaction with the plan and their job overall
- Attrition of faculty within the department, especially junior and mid-level faculty
- Promotion of faculty within the department
- Number of successful mid-career awards for trained mentors NIH (K05, K07, or K24 grants)
- Number of career development awards of mentees (e.g., K23, K08, KL2)
- Total funding from all mentored activities
- Total number of publications overseen by mentors
- An external review of the mentoring program by a senior member of the College leadership designated by the Dean every 3-5 years.

1. Institutional Resources

1.1 Research Support

There are a number of institutional resources that support clinical, translational, and basic science research. These are listed on the MUSC Research and Discovery website (<http://research.musc.edu/index.html>). Some of these resources are described below:

- **The South Carolina Translational Research (SCTR) Institute.** The recently NIH funded MUSC Clinical Translational Science Award (CTSA) that is called the South Carolina Translational Research (SCTR) Institute (<http://sctr.musc.edu/>) provides research support to investigators across campus. Within SCTR is the **SUCCESS Center**, which provides research navigation support such as collaborator and mentor matching and links to institutional cores and programs. Additionally, the SUCCESS center (<https://sctr.musc.edu/index.php/programs/success-center>) provides consultation for regulatory submissions and study subject recruitment, lists studies on clinical trials registry, and helps with grant budget development. At SCTR there is a toolkit that can help the most inexperienced investigator navigate the process required to get clinical trials underway and much more. MAP-R is a web portal that identifies approvals needed for all types of grant submissions Visit https://sctrweb2.musc.edu/research_toolkit to find a wealth of information and pertinent advice about research at MUSC.
- **Funding Opportunities** are available through the KL2 and Pilot Project Program of SCTR and the University Research Committee.
<https://sctr.musc.edu/index.php/education/kl2>
<https://sctr.musc.edu/index.php/programs/pilot-projects>
<http://research.musc.edu/urc/home.htm>
- **SCTR Vouchers** can be requested for up to \$1,000 for research services and supplies per approved protocol every six months. Investigators are limited to two active vouchers in any one six month period as long as they are for two different protocols. For more information please visit <https://sctr.musc.edu/index.php/voucher>.

The Office of Research Development (ORD) (<http://research.musc.edu/ord/index.html>), which is funded through the Vice President for Academic Affairs & Provost's Office, focuses on program and proposal development, identifies funding opportunities, develops proposal concepts, networks faculty members with complementary interests, provides grant-writing consultation and workshops, offers pre-submission critiques, compiles institutional data, and prepares competitive proposals for research resources and research training. New faculty and trainees are encouraged to visit the office in 101 Basic Science Bldg to meet the ORD staff and learn about networking opportunities. The following are among the services offered by the Office of Research Development:

Research Project Grant (RPG) Retreats are held approximately 3 times / yr. These interactive half-day sessions give individual investigators the opportunity to gain constructive criticism on a

specific research concept or proposal. Researchers at any phase of career development are encouraged to present or attend.

ORD Alerts mailing list is a service for MUSC faculty and trainees to receive research news and funding opportunities by email (<http://research.musc.edu/ordalerts.html>.)

Community of Science (COS) is an external web-based system, offered as an institutional subscription service, that provides a range of services including searchable databases for funding opportunities and expertise, as well as a personalized workbench from which to access and manage COS services.

Institutional “Boilerplate” is a compilation of information about MUSC, its components and programs, primarily used to assist MUSC faculty, staff, and trainees in preparing institutional resources and environment sections for research grant and contract proposals.

Grantsmanship Workshops are held twice per year. Led by an external consultant, the workshop content focuses on the NIH organization, peer review system, grantsmanship tips, and the ABCs of an R01 or other NIH grant application. Individual and team consultations are also offered. The workshops and consultation opportunities are an institutional research support service, provided at no charge to investigators or programs.

MyPeerReview is an internal, on-line searchable database of information about MUSC faculty service on review panels and study sections for the NIH and other federal and non-federal sponsors, as well as journals for which MUSC faculty members have served or currently serve as an ad hoc reviewer, member, editorial board, etc.

Grant Writing Help is provided by: The Office of Scientific Editing and Publications (OSEP) which provides support to augment manuscript and grant writing skills for MUSC faculty, trainees, and staff <http://research.musc.edu/APR/OSEP.html> , and through the SUCCESS center <https://sctr.musc.edu/index.php/programs/success-center>.

Grant Administrative Support. The Office of Research and Sponsored Programs (ORSP) and Office of Grants and Contracts Accounting (OGCA) provide the fundamental support need to obtain and manage sponsor-supported research funding. In addition to individual support, their websites provide important information regarding basic information needed for submission, and management of grants and contracts.

Office of Research and Sponsored Programs (ORSP):
(<http://research.musc.edu/orsp/index.html>)

Office of Grants and Contracts Accounting (GCA):
(<http://academicDepartments.musc.edu/vpfa/finance/gca/index.htm>)

Some Specific Resources for Clinical and Translational Research:

- **Clinical & Translational Research Center (CTRC).** The primary purpose of the CTRC is to support clinical and translational research projects within the institution and SCTR affiliate members as well as pilot studies that may lead to future NIH or other sources of peer-reviewed clinical/translational research grant support. The specialized staff of the CTRC consist of research nurses, laboratory personnel, nutritionists, IT specialists, and professional/administrative personnel. A core laboratory, fully-equipped outpatient clinic, dental suite, and imaging suite comprise the highly-technical physical facilities that are on hand to support your research. <https://sctr.musc.edu/index.php/programs/clinical-a-translational-research-center>
- **Biostatistics Consultation** through the SCTR Biostatistics & Epidemiology Program. Services offered are:
 - Biostatistical Education: Consultation and assistance in understanding one or more biostatistical concepts
 - Methodology/Study Design: Guidance with selecting an appropriate study design or developing a statistical analysis plan
 - Power Analysis / Sample Size Calculation: Assistance with determining the statistical power or sample size required for a proposed study
 - Data Analysis: Assistance with analyzing data collected for a research study
 - Other: (e.g. help with presentations, manuscripts, etc.)

These services are offered for several different settings:

- Assistance Preparing Grants (Federal, Foundation, Other)
- Assistance Preparing CTRC Protocols
- Assistance with Current CTRC Funded Project
- Unfunded Research Project (e.g. Abstract/Manuscript Preparation)

Links to these services are <http://sctr.musc.edu/index.php/programs/biostats> and http://sctrweb2.musc.edu/research_toolkit/preaward/grantproposal/statistic

- **Master of Science in Clinical Research Program (MSCR)** degree is offered by MUSC. This program teaches core competencies in clinical research methods, fosters development of a sustainable research focus, and provides the participant with the skills to compete for extramural support. <https://sctr.musc.edu/index.php/education/mscr-masters-of-science-in-clinical-research>
- **Society of Clinical Research and Translational Early Scientists (SOCRATES)** provides a forum for junior faculty to present their research projects in front of peers, senior researchers and statisticians, foster collaboration across multiple subspecialties at MUSC, and trouble shoot about ways to improve mentoring across campus <https://sctr.musc.edu/index.php/programs/teach/133>

Some Specific Resources for Basic Science Research:

- **Research Support** (<http://research.musc.edu/researchresources.html>)
 - Shared Core Facilities. A number of core facilities are available to support basic research (see information of each of these facilities in Research Shared Facilities on this website). In addition, an annual EXPOsition of these facilities that enables meetings with core personnel occurs in the Fall each year.
 - College of Graduate Studies (CGS) Office of Postdoctoral Affairs. In addition to providing useful information regarding practical aspects of hiring and mentoring postdoctoral scientists, the office also offers services to enable recruitment of postdoctoral scientists.

- **Responsible Conduct of Research (RCR):**
 - CGS RCR Retreat resources. All MUSC postdocs participate in a mandatory 2-day retreat focused on career development, conflict resolution, and compliance issues related to the responsible research practices. All lectures and handouts are available on the CGS website. (<http://www.musc.edu/grad/postdoc/rcr.html>)
 - The HHS Office of Research Integrity website has a wealth of educational resources on RCR practices with case scenarios, videos and tutorials for all stages of research professionals (<http://ori.dhhs.gov>)

- **Personnel/Trainees Relationships**
 - College of Graduate Studies (<http://www.musc.edu/grad/>)
 - Graduate Faculty Resources – application for appointment to graduate faculty and conflict of interest forms.
 - Mentoring Compact – AAMC recommendations for mentoring graduate students and postdocs (<http://www.aamc.org/research/postdoccompact>).
 - Graduate Council Minutes – record of monthly meetings and policy discussions.
 - Graduate Faculty Research – web-based database of faculty research interests to aid students looking for potential mentors.
 - Training Grants – listing of MUSC training grants and career development programs for graduate students and postdocs.
 - Student Handbook – specifics of graduate programs, resources, dissertation requirement, and CGS policies.
 - Summer Research Programs for Undergraduates and Health Professional Students. These programs provide students the opportunity of a 10-week long internship with MUSC faculty. (<http://www.musc.edu/grad/summer/index.html>)
 - Howard Hughes Medical Institute
 - “Lab Management: Making the Right Moves” is an essential resource for postdocs and faculty, available free on-line. (<http://www.hhmi.org/resources/labmanagement/moves.html>)

- “Entering Mentoring” provides guidance in mentoring individuals with diverse learning and personality styles.
(<http://www.hhmi.org/catalog/main?action=product&itemId=272>)
 - Human Resources Career Development Courses and Seminars. MUSC HR provides a variety of professional development workshops and seminars to facilitate more effective lab management and hiring practices.
(<http://academicDepartments.musc.edu/vpfa/hrm/training/trainingpage>)
 - International Scientific Presenters Toastmasters. This club provides a supportive environment for learning how to give effective scientific presentations, and benefit from constructive feedback of peers and faculty sponsors.(<http://scientific.freetoasthost.us>)
 - CGS725 Teaching Techniques. This course is offered every Fall and Spring semester and is open to all students and postdocs. Contact the College of Graduate Studies office for registration information (weised@musc.edu)
- **Networking Opportunities**
 - “B & BS“ (halushpv@musc.edu). The B & BS club provides an informal forum for faculty, postdoctoral and graduate students to present their research ideas, grant proposals or research problems to a mixed audience that can provide useful feedback and often potential collaborations or exchange of reagents
 - MUSC Core Facilities “Octoberfest” Reception. This is an annual event for core facility directors to highlight the services available.
 - Research INKlings (<http://research.musc.edu/inklings.html>). INKlings is a monthly on-line news letter of recent events of interest to MUSC researchers.
 - SACNAS promotes a diverse research academy by providing workshops and networking opportunities that encourage Chicano/Hispanic and Native American students and postdocs to pursue and persist in STEM fields. This is also an excellent recruitment resource. (<http://www.sacnas.org/>)
 - ABRCMS is an annual conference that brings underrepresented minority students and postdocs together to present their research in an environment that encourages their development into future STEM faculty. This is also an excellent recruitment venue. (<http://www.abrcms.org/index.html>)
 - www.MinorityPostdoc.org hosts a variety of career development resources for postdocs, including job listings and articles, with an emphasis on minority scholars.

1.2 Resources for Education

1.2.1. Types of Educational Technology

- a) Tegrity - Tegrity is a lecture capture service that lets faculty automatically capture every class – on and off campus – for later review by every student, anytime, anywhere. <http://tegrity.musc.edu>
- b) Adobe Connect - Adobe Connect is a Web conferencing software that securely shares presentations and multimedia right from a desktop computer, supporting feedback from hundreds of participants — all using

- c) web browser and the Adobe Flash® Player runtime.
<http://connect.musc.edu>

1.2.2 Education Technology Services (ETS) Provides support in the areas of digital imaging, audio visual support in centrally scheduled classrooms and distance education technologies, and video production.

1.2.3. Apple Tree Society - The Apple Tree Society exists to foster dialogue and activity related to the scholarship of health professions teaching through campus and national partnerships. <http://www2.edserv.musc.edu/appletree/>

The following are the goals of the Society:

- Expand the faculty development opportunities related to teaching on campus.
- Initiate programs that recognize and enhance the value of teaching as a scholarly activity.
- Explore and support innovative methods and technologies for teaching and learning.
- Promote professional development of current and future educators.

Activities of the Society include:

- Monthly Brown Bags – noontime sessions on topics related to the Scholarship of teaching
- Collegiality – informal meetings to discuss teaching and learning

1.2.4. Copyright Toolkit - Understanding and complying with the laws governing the use of copyrighted materials is daunting. The information on this site is directed at teaching faculty, students, scientific writers, researchers, and others at MUSC who use copyrighted works. It includes Copyright @ MUSC: Policies, Forms, & Resources, forms, and information about Coursepacks, Plagiarism and How to Cite Sources, releases, Images and text, and print and digital/online resources. Many of the links lead to the excellent copyright Websites of other universities. <http://copyright.library.musc.edu/page.php?id=1314>

1.2.5. Creating Collaborative Care/Interprofessional Education - Creating Collaborative Care (C3) is a Quality Enhancement Plan (QEP) for the Medical University of South Carolina that focuses on inter-professional education. <http://academicDepartments.musc.edu/c3/>

1.2.6. Faculty teaching awards (College and University) - In recognition of faculty accomplishments the individual colleges, as well as the university, present annual awards in teaching, research, and service. These awards are very competitive underscoring the excellence of the faculty with respect to their achievements. The awards are sponsored by various groups. The university annual awards include:

- Developing Scholar Awards

- Outstanding Clinician Awards
- Teaching Excellence Awards (Developing Teacher, Educator-Lecturer, Educator-Mentor)
- Distinguished Faculty Service Awards

1.2.7. Library resources - <http://www.library.musc.edu/>

- a) Computer labs – 4 computer labs are available for use by faculty for their classes. The labs host an average of 25 iMac computers that support the use of both Windows and Macintosh operating systems
- b) Learning Commons – An initiative of the MUSC library currently under development designed to provide spaces for study and socialization and access to the latest technologies for teaching and learning.
- c) Center for Academic and Research Computing – Works with faculty and staff across the campus to design, develop and support interactive instructional programs.
- d) Journals The library currently provides access to approximately 17,498 e-journals and 34 current print-only subscriptions <http://muscls.musc.edu/>

1.2.8. Center for Academic Excellence - The CAE is dedicated to improving learning and teaching on campus. Health care providers must learn and re-learn in order to adapt their practices to the latest advances in biomedical science. They also must collaborate with colleagues across professions to provide quality care and conduct groundbreaking research. That’s why the CAE provides collaborative learning groups; and the effectiveness of these groups is why a majority of MUSC students choose to participate—in addition to their scheduled class time. Another vital part of the work of the CAE is teaching the material and the strategies necessary for success on national and state licensing board/certifying exams. Under the tutelage of CAE faculty and their fellow students, students approach these rigorous exams with confidence and exceed national performance averages. <http://www.musc.edu/cae/>

1.2.9. The Writing Center - The Writing Center faculty members teach students to communicate effectively with their professors, their fellow students, and their patients. <http://www.musc.edu/writingcenter/>

1.2.10. Enrollment Services - Enrollment Services oversees student admissions, records and financial aid. <http://www.musc.edu/em>

2. State or National Resources

2.1. Funding Agencies

By going to the MUSC Research and Discovery website (<http://research.musc.edu/researchresources.html>) and clicking on Funding Opportunities under the Office of Research Development, information on the following opportunities is available:

- Funding alerts
- Federal and state funding opportunities
- Sponsor opportunities (Corporate and Foundations)
- New Investigator Funding Opportunities
http://research.musc.edu/newinv_fund.html
- Postdoctoral Funding Opportunities
- Limited Submissions Competitions Opportunities

2.2. Associations

- **Association of American Medical Colleges (AAMC).** The AAMC represents all 133 accredited U.S. medical schools; approximately 400 major teaching hospitals and health systems, including 68 Department of Veterans Affairs medical centers; and nearly 90 academic and scientific societies. Through these institutions and organizations, the AAMC represents 125,000 faculty members, 75,000 medical students, and 106,000 resident physicians. Through its many programs and services, the AAMC strengthens the world's most advanced medical care by supporting the entire spectrum of education, research, and patient care activities conducted by member institutions. <http://www.aamc.org/>
- **Association of Women in Science (AWIS)** is a national advocacy organization championing the interests of women in science across all disciplines and employment sectors. By breaking down barriers and creating opportunities, AWIS strives to ensure that women in these fields can achieve their full potential. <http://www.awis.org/>
- **National Postdoctoral Association.** The NPA provides many resources useful for enriching the research environment, managing a research lab, and expectations of mentors and trainees. MUSC is an affiliate institution which provides membership to all faculty, postdocs, and students. <http://www.nationalpostdoc.org/>

Dept of Medicine Annual Career Development Plan (CDP) Prepared by Mentee

Instructions to Mentees:

The mentee should enter quantitative values for the project goals. Goals will be tracked on an ongoing basis with the mentor. Please complete this form at the beginning of each academic FY, and update the progress on goals at midpoint and near the end of the FY for your mentor. Your mentor should review and discuss your progress at these times.

Instructions to Mentors:

Please review the mentee's CV and this CDP prior to meeting your mentee.

(Question 1 of 23)

	Name	Division
Mentor:	<input type="text"/>	<input type="text"/>
Co-Mentor:	<input type="text"/>	<input type="text"/>

(Question 2 of 23)

Mentee	Division	Current Rank	Date of Last Promotion
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

(Question 3 of 23)

Time allocation as estimated by Mentee:	Percentage of Time:
% Teaching/training/providing mentoring	<input type="text"/>
% Research	<input type="text"/>
% Patient Care	<input type="text"/>
% Administration	<input type="text"/>
% Other Creative Professional Activity	<input type="text"/>

How (if at all) would you like to change this time distribution and how could you justify that change? *(Question 4 of 23)*

Academic Appointment

Do you understand the expectations for your career advancement and promotion within the University? *(Question 5 of 23)*

Yes No

If no, provide questions you have about career advancement and promotion at the University: *(Question 6 of 23)*

Current Professional Responsibilities

List your major professional responsibilities and if you anticipate significant changes in the coming year *(Question 7 of 23)*

Current FY (Short Term) Professional Goals

Please enter **n/a** in the goal fields that do not apply. Metrics for Success/Projected Goals and Actual Achievement for current mentoring year:

(Question 8 of 23)

UNIVERSL GOALS	1st Year					
	Target FY Goal	Mid-Term Goal Status Update	FY Mid-Term % Achieved	End of FY Goal Status Update	End of FY % Achieved	Target 3 Year Goal
# Publications – Peer Reviewed	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
# Publications - Other	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
# Presentations - National /International Meetings	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
# Presentations - Local / Regional	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
# Committees - National (Professional and Scientific)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
# Committees - Local/Regional	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
# Mentees - Faculty	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

I plan to Mentor						
Additional Goal TBD by Mentee (Optional)						

Universal Goals - Comments (optional): *(Question 9 of 23)*

(Question 10 of 23)

<i>RESEARCH GOALS</i>	1st Year					
Description	Target FY Goal	Mid-Term Goal Status Update	FY Mid-Term % Achieved	End of FY Goal Status Update	End of FY % Achieved	Target 3 Year Goal
# of trainees mentored (students, post-docs, etc...)						
# Grants Submitted as PI (All Sources)						
# Grants Awarded PI						
# Grants Submitted as Co-I						
# Grants Awarded Co-I						
# Societies - Editorial Boards /Study Sections/Review Panels						
Additional Goal TBD by Mentee (Optional)						

Research Goals Comments (optional): *(Question 11 of 23)*

(Question 12 of 23)

<i>EDUCATION GOALS</i>	1st Year					
Description	Target FY Goal	Mid-Term	FY Mid-Term	End of FY Goal	End of FY	Target 3 Year

		Goal Status Update	% Achieved	Status Update	% Achieved	Goal
# of trainees mentored	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
# Curricula Developed – Students & Residents	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
# Teaching Innovations Developed	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
# QI Patient Safety Projects	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
# Teaching Activities (Courses / Groups)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
EVU Targets Achieved (YES / NO) APPLIES <u>ONLY</u> TO GIM DIVISION	{Select}	{Select}	<input type="text"/>	{Select}	<input type="text"/>	<input type="text"/>
Additional Goal TBD by Mentee (Optional)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Educational Goals Comments (optional): *(Question 13 of 23)*

(Question 14 of 23)

CLINICAL GOALS	1st Year					
Description	Target FY Goal	Mid-Term Goal Status Update	FY Mid-Term % Achieved	End of FY Goal Status Update	End of FY % Achieved	Target 3 Year Goal
# Innovative Care Process Development / QI	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
# Honors / Awards	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
# Lectures / Grand Rounds / CME Credits	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Evidence of Excellence in Clinical Education (YES / NO)	{Select}	{Select}	<input type="text"/>	{Select}	<input type="text"/>	<input type="text"/>
Recognized as a clinical expert in referrals (YES / NO)	{Select}	{Select}	<input type="text"/>	{Select}	<input type="text"/>	<input type="text"/>
Additional Goal TBD by Mentee (Optional)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Clinical Goals Comments (optional): *(Question 15 of 23)*

3 Year (Long Term) Career Goals Statement

List your professional goals for the next 3 years. Indicate how you will assess if the goal were accomplished.

Goal: *(Question 16 of 23)*

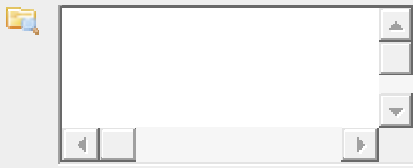
Expected Outcome: *(Question 17 of 23)*

Are you satisfied with your personal-professional balance? If not—what are your plans for modifying how you spend your time? *(Question 18 of 23)*

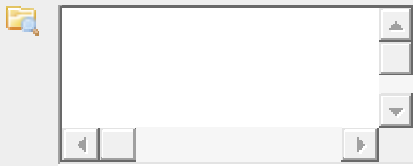
CV: *(Question 19 of 23)*



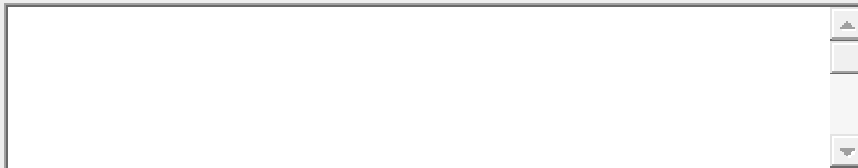
CDP: *(Question 20 of 23)*

An empty rectangular box with a light gray border, intended for uploading documents. It features a small folder icon in the top-left corner and a vertical toolbar on the right side with three buttons: an upward-pointing arrow, a square, and a downward-pointing arrow. A horizontal toolbar at the bottom contains a left-pointing arrow, a square, and a right-pointing arrow.

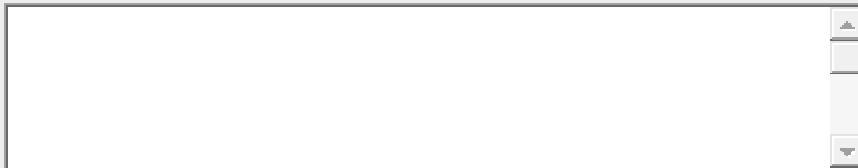
Miscellaneous documents: *(Question 21 of 23)*

An empty rectangular box with a light gray border, intended for uploading documents. It features a small folder icon in the top-left corner and a vertical toolbar on the right side with three buttons: an upward-pointing arrow, a square, and a downward-pointing arrow. A horizontal toolbar at the bottom contains a left-pointing arrow, a square, and a right-pointing arrow.

Progress Notes: *(Question 22 of 23, Question to be answered by Grader)*

A large, empty rectangular text input field with a light gray border. On the right side, there is a vertical toolbar with three buttons: an upward-pointing arrow, a square, and a downward-pointing arrow.

Comments from other Mentors: *(Question 23 of 23, Question to be answered by Grader)*

A large, empty rectangular text input field with a light gray border. On the right side, there is a vertical toolbar with three buttons: an upward-pointing arrow, a square, and a downward-pointing arrow.

Review your answers in this evaluation. If you are satisfied with the evaluation, click the SUBMIT button below. Once submitted, evaluations are no longer available for you to make further changes.

Mentee Form to Evaluate Mentor

Date: _____

Mentee Name: _____ Division: _____

Mentor Name: _____ Division: _____

ITEM	Excellent	Fair	Poor		
1. The mentor has reviewed my updated CV in the FAIR system and provided feedback regarding my goals.	1	2	3	4	5
2. The mentor is available to help me monitor my goals and related challenges.	1	2	3	4	5
3. The mentor serves as an excellent role model.	1	2	3	4	5

Comments:

Mentor Form for Evaluation of Mentee

Date: _____

Mentee Name: _____ Division: _____

Mentor Name: _____ Division: _____

Check box if you are lead mentor []

ITEM	Excellent	Fair	Poor		
1. The mentee maintains an updated CV in the FAIR system	1	2	3	4	5
2. The mentee is available on a regular basis and is approachable.	1	2	3	4	5
3. The mentee exhibits understanding of the requirements for promotion and tenure.	1	2	3	4	5
4. The mentee has a good understanding of the goals outlined in their annual Career Development Plan (CDP).	1	2	3	4	5
5. The mentee accepts feedback/suggestions from the mentor and responds appropriately.	1	2	3	4	5

Comments: